# SUMMARY OF HYDROLOGIC CONDITIONS IN BIG CYPRESS BASIN JULY, 2008

#### SUMMARY

The prevailing drought conditions received much needed relief with above normal rainfall received in July. Surface and groundwater levels responded favorably to catch up with the annual wet season cycle, but were slightly below normal. The water control structures were set to normal wet season operating schedules. Backpumping operations were discontinued. Phase II water restrictions continued across southwest Florida.

#### RAINFALL

Westerly winds in the upper atmosphere dominated the weather pattern for most of July in South Florida to generate regular frequency of summertime convective thunderstorms. Many of the stronger storms stayed inland. The weighted average rainfall of 14 reporting stations across the Basin was 11.14 inches, or 29 percent above normal rainfall for July. The cumulative rainfall for the year to date is approximately 11% below normal. A summary of rainfall recorded at various stations across the Basin is illustrated in Table No. 1 and Figure 1.

#### STREAMFLOWS AND GROUNDWATER LEVELS

Surface and groundwater levels in the canals, streams and regional aquifers continued to ride the upward trend of the annual wet cycle, but were slightly below normal July levels. Most of the water control structures were set to wet season operating schedules. A summary of the surface water stage hydrographs at selected locations is illustrated in Figures 2 and 3. Hydrographs of selected key indicator wells are illustrated in Figure 4. Due to low tailwater conditions, none of the four backpumping stations were operated.

The groundwater levels in the surficial water table aquifer recorded an average rise of 2.1 feet and the Lower Tamiami aquifer wells recorded an

average rise of 3.4 feet from the previous month, but stayed at slightly below normal July levels. Phase II water restriction continued across southwest Florida. The District staff has aggressively reminded residents to cut back on water use as far as practicable.

#### **WATER USE**

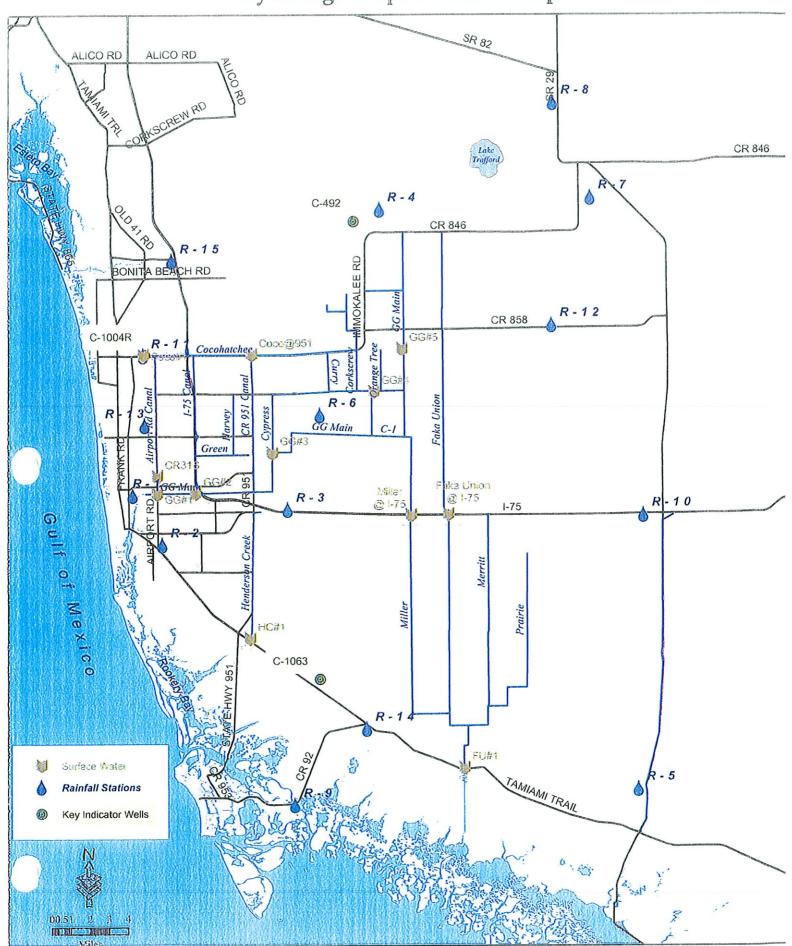
The average daily raw pumpages by the major public water utilities in the Basin during July 2008 are as follows:

#### Average Daily Raw Water Pumped (MGD)

| Utility                             | July 2008 | July 2007 |
|-------------------------------------|-----------|-----------|
| City of Naples Water Utility        | 13.84     | 15.57     |
| 2. Collier County Utilities         | N/A       | 25.84     |
| Marco Island Water Utility*         | N/A       | 5.30      |
| 4. Immokalee Water & Sewer District | 1.67      | 2.14      |

<sup>\*</sup> Surface water only.

### Hydrologic Report Station Map



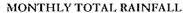
MAP 1

# TABLE 1 RAINFALL REPORT – JULY 2008 DISTRICT/BASIN RAINFALL STATIONS (ALL NUMBERS ARE IN INCHES)

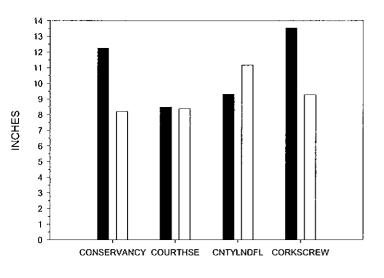
| STATION<br>INDEX<br>NO. | STATION<br>NAME                                    | CURRENT<br>MONTH<br>2008 | LONG TERM<br>AVERAGE<br>FOR THIS<br>MONTH | CALENDAR<br>YEAR 2008<br>CUMULATIVE<br>TOTAL | AVERAGE<br>CALENDAR<br>YEAR<br>TO DATE | LONG<br>TERM<br>YEARLY<br>AVERAGE |
|-------------------------|--|--------------------------|---|--|--|-----------------------------------|
| R-1                     | CONSERVANCY  | 12.25                    | 8.21                                      | 30.72  | 28.61                                  | 52.67                             |
| R-2                     | COLLIER COUNTY<br>COURTHOUSE                       | 8.49                     | 8.39                                      | 25.38  | 28.40                                  | 52.08                             |
| R-3                     | COLLIER COUNTY<br>LANDFILL                         | 9.30                     | 11.16                                     | 23.17  | 34.52                                  | 64.10                             |
| R-4                     | CORKSCREW<br>SWAMP<br>SANCTUARY                    | 13.52                    | 9.27                                      | 31.73  | 33.76                                  | 58.21                             |
| R-5                     | FAKAHATCHEE<br>STRAND STATE<br>PRESERVE            |                          |   |  |  | 61.94                             |
| R-6                     | GOLDEN GATE<br>FIRE STATION #2                     | 13.45                    | 10.14                                     | 36.02  | 31.59                                  | 57.32                             |
| R-7                     | IMMOKALEE<br>LANDFILL                              | 6.17                     | 7.84                                      | 28.44  | 29.67                                  | 51.93                             |
| R-8                     | IFAS (INST. OF<br>FOOD/AGRI.SCIE.)<br>N. IMMOKALEE | 12.21                    | 7.31                                      | 31.47  | 29.29                                  | 50.91                             |
| R-9                     | MARCO ISLAND<br>R.O. PLANT                         | 8.71                     | 8.02                                      | 23.24  | 29.90                                  | 54.43                             |
| R-10                    | FAKAHATCHEE<br>NORTH END                           | 8.60                     | 9.37                                      | 31.96  | 35.21                                  | 61.03                             |
| R-11                    | COCOHATCHEE<br>STRUCTURE #1                        | 9.68                     | 7.41                                      | 23.43  | 26.16                                  | 47.88                             |
| R-12                    | SILVER STRAND<br>(AVE MARIA)                       | 11.58                    | 7.76                                      | 21.10  | 31.73                                  | 56.30                             |
| R-13                    | BCB FIELD<br>STATION                               | 16.30                    | 8.46                                      | 30.85  | 29.54                                  | 55.03                             |
| R-14                    | COLLIER/SEMINOLE<br>STATE PARK                     | 14.31                    | 8.32                                      | 21.10  | 28.77                                  | 54.43                             |
| R-15                    | BONITA SPRINGS<br>WATER PLANT                      | 11.40                    | 8.56                                      | 23.58  | 30.09                                  | 54.07                             |

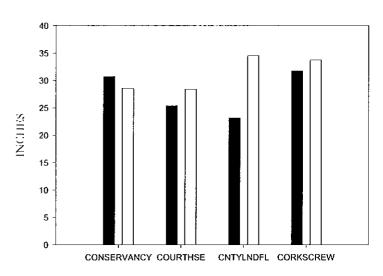
#### MONTHLY AND YEAR-TO-DATE RAINFALL AT SELECTED LOCATIONS

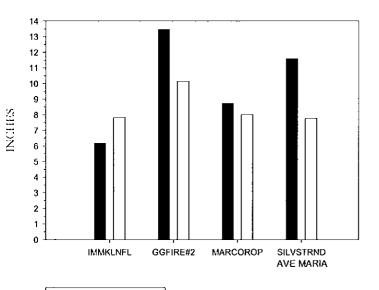
**JULY 2008** 

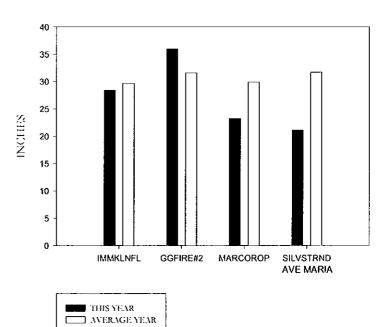


#### RAINFALL TO DATE, YEAR 2008









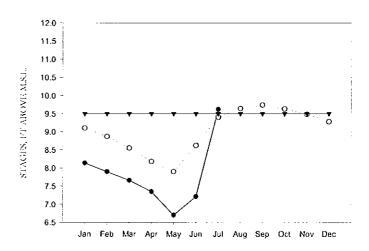
THIS MONTH ☐ AVERAGE MONTH

## MONTHLY MEAN CANAL STAGES AT SELECTED LOCATIONS 2008

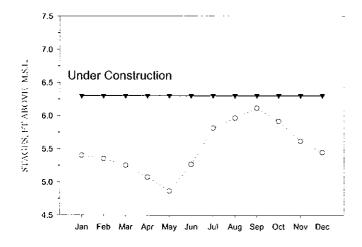
#### **GOLDEN GATE CANAL AT WEIR 1**

# 5.5 5.0 4.5 4.5 3.5 2.5 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

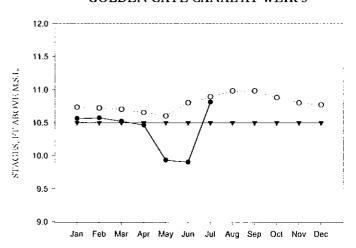
#### **GOLDEN GATE CANAL AT WEIR 4**



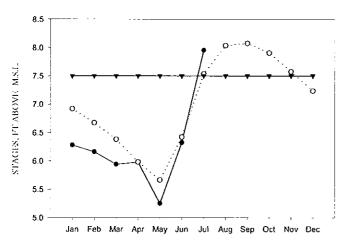
**GOLDEN GATE CANAL AT WEIR 2** 



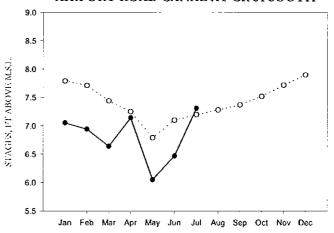
**GOLDEN GATE CANAL AT WEIR 5** 



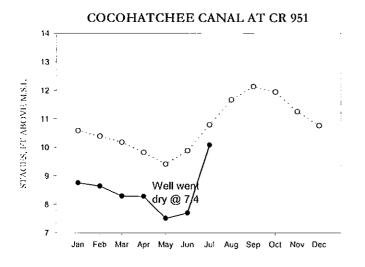
**GOLDEN GATE CANAL AT WEIR 3** 

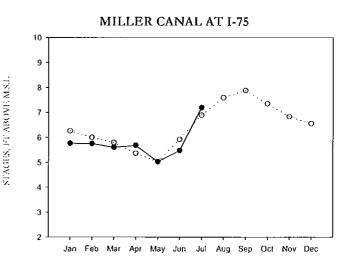


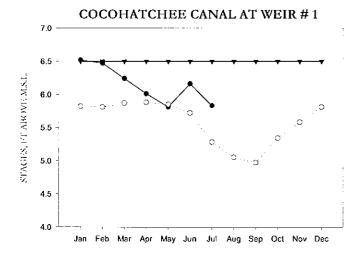
#### AIRPORT ROAD CANAL AT CR 31 SOUTH

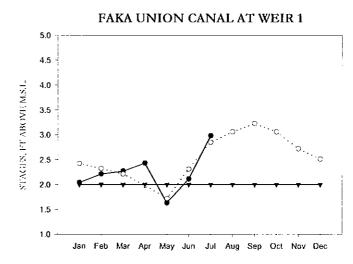


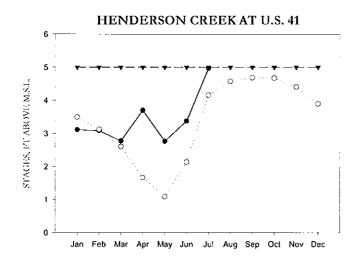
# MONTHLY MEAN CANAL STAGES AT SELECTED LOCATIONS 2008

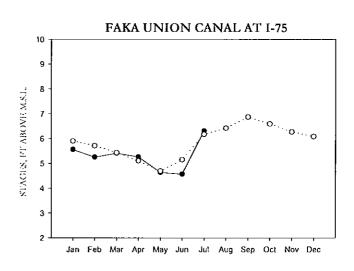








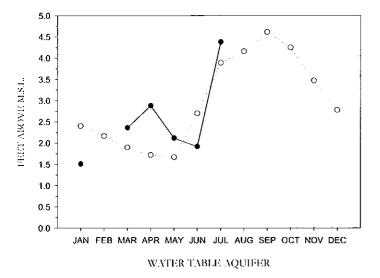




# GROUNDWATER LEVELS AT SELECTED LOCATIONS 2008

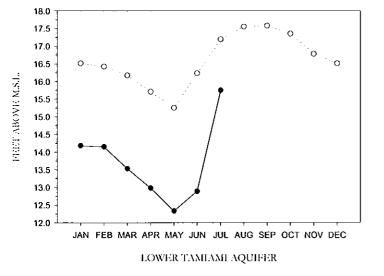
#### **GROUND WATER LEVELS AT WELL C-1063**

NEAR SIX Ls FARM ON US 41 EAST



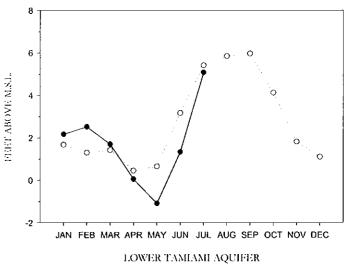
#### **GROUND WATER LEVELS AT C-492**

CORKSCREW SWAMP SANCTUARY



#### GROUND WATER LEVELS AT WELL C-1004R

PALM RIVER BOULEVARD, NORTH NAPLES



2008

FIGURE 4

# WATER USE BY MAJOR PUBLIC UTILITIES 2008

